LIFE SCIENCES

featuring
Pharmacology Letters

VOLUME 46, 1990
AUTHOR AND SUBJECT INDEX

LIFE SCIENCES EDITORIAL POLICY

LIFE SCIENCES was founded with the intention that scientific reports would be published expeditiously, within weeks of acceptance. *LIFE SCIENCES* has adhered to its original objective by keeping abreast of current advances in communication and publication technologies to rapidly disseminate new and significant information in pharmacology.

LIFE SCIENCES is an international weekly journal publishing full reports on the pharmacological aspects of biochemistry, neurobiology, endocrinology, immunology, molecular biology, physiology and toxicology. Contributions are reviewed and accepted on the basis of their scientific merit and the need for rapid publication. Contained in the Journal:

- New information
- Minireviews on selected aspects of a field undergoing rapid change
- Brief conceptual papers based on original data
- Relevant clinical discoveries
- Collections of selected papers on current concepts in a particular field
- Symposia papers.

The *PHARMACOLOGY LETTERS* section of the Journal accelerates the publication process for papers of six pages or less. This section features:

- Papers of immediate interest
- Papers announcing unique and possibly controversial data
- Articles summarizing fast-developing or emerging areas of pharmacologic research
- Forum for letters to the editor.

PERGAMON PRESS
New York • Oxford • Beijing • Frankfurt • São Paolo • Sydney • Tokyo • Toronto

LIFE SCIENCES

(ISSN 0024-3205)

Founder: B.B. Brodie
1907-1989

Executive Editor: R. Bressler, M.D.

EDITORS

K. Brendel, Ph.D.
T.F. Burks, Ph.D.
T.P. Davis, Ph.D.
D.G. Johnson, M.D.
D.L. Kreulen, Ph.D.
T.J. Lindell, Ph.D.
I.G. Sipes, Ph.D.
H.I. Yamamura, Ph.D.

PHARMACOLOGY LETTERS

Frank Porreca, Ph.D.
Robert B. Raffa, Ph.D.

Journal Production Editor: Christine Knowles Wade
Assistant Production Editor: Charlotte Anderson
Editorial Assistant: Phillip H. Poindexter
Editorial Offices: 655 North Alvernon Suite 212, Tucson AZ 85711 USA

EDITORIAL ADVISORY BOARD

Julius Axelrod, *USA*
Floyd E. Bloom, *USA*
Marvin R. Brown, *USA*
Michael J. Brownstein, *USA*
David R. Burt, *USA*
Kevin J. Catt, *USA*
Steven R. Childers, *USA*
Arthur K. Cho, *USA*
Marlene L. Cohen, *USA*
Erminio Costa, *USA*
Alan Cowan, *USA*
Brian M. Cox, *USA*
Joseph T. Coyle, *USA*
Ian Creese, *USA*
Pedro Cuatrecasas, *USA*
John W. Daly, *USA*
Richard A. Deitrich, *USA*
Andre Dray, *UK*
Sam J. Enna, *USA*
John D. Fernstrom, *USA*
Laurel A. Fisher, *USA*
William W. Fleming, *USA*
Edward D. French, *USA*
Ray W. Fuller, *USA*
Jay Gandolfi, *USA*
Marilyn Halonen, *USA*
Mark R. Haussler, *USA*
Jacob M. Hiller, *USA*
John W. Holaday, *USA*
Jerry B. Hook, *USA*
Akira Horita, *USA*
Victor J. Hruby, *USA*
Leslie L. Iversen, *UK*
Donald J. Jenden, *USA*
Arnold M. Katz, *USA*
Peter T. Kissinger, *USA*
David M. Kochhar, *USA*
Irwin J. Kopin, *USA*
Hugh E. Laird, *USA*
William E.M. Lands, *USA*
Robert J. Lefkowitz, *USA*
Daniel C. Liebler, *USA*
Horace H. Loh, *USA*
Elias Meezan, *USA*
Joseph Meites, *USA*
Herbert Y. Meltzer, *USA*
Kenneth E. Moore, *USA*
David L. Nelson, *USA*
Charles B. Nemeroff, *USA*
Richard W. Olsen, *USA*
Bert W. O'Malley, *USA*
Gavril W. Pasternak, *USA*
Frank Porreca, *USA*
Peter W. Ramwell, *USA*
Russel J. Reiter, *USA*
William R. Roeske, *USA*
Andrew V. Schally, *USA*
Thomas L. Smith, *USA*
Solomon H. Snyder, *USA*
Sydney Spector, *USA*
David U'Prichard, *USA*
John R. Vane, *UK*
Elliot S. Vesell, *USA*
Ronald R. Watson, *USA*
Eddie Wei, *USA*
Richard J. Wurtman, *USA*

Publishing, Subscription and Advertising Offices: Pergamon Press, Inc., Fairview Park, Elmsford, New York 10523, USA, and Pergamon Press plc, Headington Hill Hall, Oxford OX3 0BW, England.

Published Weekly (2 volumes of 26 numbers each per annum): *Annual institutional subscription rate* (1990) DM2860.00; *Two-year institutional subscription rate* (1990/91): DM5434.00; *Personal subscription rate* for those whose library subscribes at the regular rate (1989): DM259.00. Prices are subject to change without notice. Notify 8 weeks in advance of address change with a copy of the subscription mailing label. *Microforms subscriptions:* Information available upon request. *Back issues* of all previously published volumes, in both hard copy and on microform, are available direct from Pergamon Press offices.

Copyright © 1990 Pergamon Press plc • Printed in the USA.

It is a condition of publication that manuscripts submitted to this journal have not been published and will not be simultaneously submitted or published elsewhere. By submitting a manuscript, the authors agree that the copyright for their article is transferred to the publisher if and when the article is accepted for publication. The copyright covers the exclusive rights to reproduce and distribute the article, including reprints, photographic reproductions, microform or any other reproductions of similar nature and translations. No part of this publication may be reproduced, stored in a retrieval system or transmitted in any form or by any means, electronic, electrostatic, magnetic tape, mechanical, photocopying, recording or otherwise, without permission in writing from the copyright holder.

Photocopying information for users in the U.S.A.: The Item-Fee Code for this publication indicates that authorization to photocopy items for internal or personal use is granted by the copyritht holder for libraries and other users registered with Copyright Clearance Center(CCC) Transactional Reporting Service provided the stated fee for copying beyond that permitted by Section 107 or 108 of the United States Copyright Law is paid. The appropriate remittance of $3.00 per copy per article is paid directly to the Copyright Clearence Center Inc., 27 Congress Street, Salem, MA 01970.

Permission for other use: The copyright owner's consent does not extend to copying for general distribution, for promotion, for creating new works, or for resale. Specific written permission must be obtained from the publisher for such copying. Please contact the Subsidiary Rights Manager, Publishing Services Dept. at either Pergamon Press plc or Pergamon Press, Inc.

The Item-Fee Code for this publication is: 0024-3205/90 $3.00 + .00

Second class postage paid at Elmsford, N.Y. and additional offices.
Postmaster: Send address changes to: Pergamon Press, Inc., Fairview Park, Elmsford, NY 10523.

™ The paper used in this publication meets the minimum requirements of American National Standard for Information Sciences—Permanence of Paper for Printed Library Materials, ANSI Z39.48-1984

Life Sciences, Vol. 46, pp. 1-8 Pergamon Press
Printed in the U.S.A

AUTHOR INDEX

Abbott, P. 693
Abdallah, Fares 379
Abe, Makoto 1837
Abe, Y. 1657
Abel, E.L. 903
Ackerman, Steven 729
Ader, Robert 1937
Ahlner, J. 543
Ahmed, Mahmoud S. 553
Alailima, Sione T. 793
Aldegunde, Manuel A. 875
Alleyne, George A.O. 1903
Amoroso, Salvatore 885
Andac, S. Orhan 1471
Anderson, George M. 247, 625, 1755
Andersson, R.G.G. 543, 1099
Annunziato, Lucio 885
Anton, Raymond F. 1145
Aoki, Nobuo 427
Arakawa, Kikuo 335
Arbilla, S. 443
Ariyoshi, Hideo 1059
Arleth, Anthony 181
Arlow, F.L. 777
Arora, Pramod K. 379
Artigas, F. 239
Asin, K.E. 1817
Ator, Mark A. 181
Auszmann, Jeanine M. 351
Avakian, E.V. 1569
Axelsson, K.L. 543
Azimuddin, Saira 343
Bach, J.F. 1687
Bagchi, S.P. 857
Ballieux, Rudy E. 1233
Balster, Robert L. 895
Banba, Nobuyuki 1045
Bandopadhyay, A.K. 1155
Banks, Robert O. 577, 585
Barbari, A. 1649
Barnes, Deborah E. 707
Barry, Susan R. 1389
Bartness, Timothy J. 147
Baskurt, Oguz K. 1471
Baylis, Christine 785
Becker, Howard C. 1145
Bednarz, L. 1817
Bellows, Elisabeth P. 707
Bem, Wojciech T. 1279
Bembenek, Michael E. 1873
Benedito, Sara 121
Benfey, B.G. 743 minireview
Bernard, David G. 1699
Bernhard, V.M. 715
Bertilsson, Leif 1707
Berton, Giorgio 1265
Bertsch, Barbara 917
Billington, Charles J. 147
Biswas, Narendra M. 127
Blask, David E. 909
Blumtritt, P. 513
Bochner, Felix 1067
Bokser, Lazaro 999
Bonuccelli, U. 1241
Borrell, Jose 1119
Bosque, MA. Angeles 1287
Bowden, Charles L. 1175
Boyd, Michal L. 965
Brancaccio, N. 1207
Breneman, Stephen 1937
Brenner, Gary 1937
Brodin, Ernest 287, 1707
Brondel, L. 1381
Brooks, Gwendolyn R. 1007
Broomfield, C.A. 1189
Bruuns, J. 1465
Buc-Calderon, Pedro 207
Bungay, Peter M. 105
Burgos, C. 397
Burns, H. Donald 1103
Bush, Marilyn J. 619
Busse, Martin W. 647
Cabrini, Giulio 1265
Cacicedo, Lucinda 55
Caglayan, Serdar 1471
Cagnacci, A. 1241
Calder, L.D. 1773
Caltabiano, Madelyn M. 181
Canoll, Peter D. PL-9
Canzoniero, Lorella M.T. 885
Cao, Lequn 577, 585
Carl, Philip L. 699
Cassano, Giovanni B. 1833
Castane, P.M. 1893
Castillo, M. 397
Castrogiovanni, Paolo 1833
Ceryak, Susan 1727
Chaki, Kyoji 1671
Chakir, J. 257
Chakraborty, Munmun 1755

0024-3205/90 $3.00 + .00
Copyright (c) 1990 Pergamon Press plc

Chambers, Janice E. 1635
Chandler, W.F. 507
Chandra, Mahesh 367
Chang, Eugene B. 1913
Chang, Ki-Churl 1715
Chang, Sulie L. 1825
Chase, Thomas N. 73
Chatterjee, Diptendu 1755
Chaudhuri, Arnab 127
Chen, C.F. 1929
Chen, Chen 983
Chen, Yu-Mai 1167
Chen, Zhao Rong 1067
Chiou, Shirley 173
Chiu, Ted H. 519
Cho, Kyung Woo 1977
Chou, C.K. 1929
Chretien, M. 1427
Christenson, Marie 1021
Chung, G.H. 1343
Churchill, Monique C. 1953
Churchill, Paul C. 1953
Clark, J.H. 1189
Clough, David L. 865
Cohen, Dalia 489
Cohen, Donald J. 247, 625, 1755
Cohen, Nicholas 1937
Coimbra-Farges, R. 663
Collins, Allan C. 935
Collins, Delores A. 1051
Compton, David R. 1575
Cone, E.J. 635
Convents, A. 497
Coram, Willie Mae 19
Corbella, Jacinto 1287
Coryell, Virginia H. 965
Coscia, Carmine J. 1279
Costa, Erminio 155
Costa, Gonzalo 121
Cragoe, Edward J. Jr. 885
Croiset, Gerda 419
Crumbley, Arthur J. III 1765
Cruz, M. Antonieta 99
Csernansky, John G. 707
Cubeddu, Luigi X. 699
Dahl, S.G. 443
Daly, John W. 671
Damerau, B. 1465
Danysz, Wojciech 155
Dardenne, M. 1687
Dasgupta, Amitava 67
Davis, Elizabeth A. 729
Davis, John S. 173
Dayer, Pierre 991
De Angelis, S. 1027
De Baetselier, P. 497
De Boer, Sietse F. 419
De Ceballos, M.L. 1619
De Las Carreras, Carola 1707
De Los Frailes, Maria T. 55
De Luigi, Ada 197
DePriest, Derryl 785
De Simoni, Maria Grazia 197
De Vos, H. 497
De Wied, David 419
Dedrick, Robert L. 105
Dees, W. Les 165
Delgado, Jose M.R. 55
Del Pizzo, Richard 1139
Del Rio, J. 1619
Demura, Hiroshi 59
Deschaux, P. 257
Dikmenoglu, Neslihan 1471
Di Pirro, J.M. 693
Di Renzo, Gianfranco 885
Disselkamp-Tietze, J. 1271
Dixon, Walter R. 1167
Doerr, J.C. 693
Domingo, Jose L. 1287
Doria, Lorna 67
Douglas, Bruce R. 281
Douglas, Frank L. 19
Dray, Fernand 1857
Dresse, A. 1879
Dubick, M.A. 715
Duncan, Pam 1923
Dunlop, David S. 1517
Ebihara, Akio 827
Echevarria, Edward PL-1
Eldefrawi, Mohyee E. 553
Elisseou, E. Michael 427
Ellerbrock, Brenda R. 1051
Elliott, Mary E. 1479
Ellis, Virginia R. 1953
Emmett, M.R. 687
Emoto, Tatsushi 1045
Ende, Milton 1373
Ende, Norman 1373
Eng, Samuel P. 273, 865
Eng, Wai-Si 1103
Engber, Thomas M. 73
Ensminger, W. 507
Eskelson, C.D. 715
Esterman, Michail 917
Eto, Tanenao 405
Eurukawa, Tatsuo 1301
Ezekiel, Mildred 181
Ezquerra, C. 1359
Fadda, Emanuela 155
Fantino, M. 1381
Fauler, J. 1465
Faunce, D. 1531
Fay, Michael J. 619
Ferguson, E.J. 693
Ferris, Mary W. 881
Fiedler, G. Curt 379
Fine, Albert S. 351
Fioretti, P. 1241
Fisher, Robert S. 1021
Fivush, Barbara 1021

Floege, J. 1465
Flowers, Daniel G. 653
Flynn, Neil 1597
Fodritto, Fabio 197
Foecking, Mark F. 881
Fok, Kam F. 767
Forrest, David W. 165
Fortuna, S. 1027
Franchimont, N. 1879
Friedman, R.L. 543
Fromm, Hans 1727
Fuentes, Francine 165
Fuhrhop, J.-H. 513
Fujimura, Akio 827
Fukui, K. 1657
Gagnerault, M.Cl. 1687
Gala, Richard R. 1407
Ganguly, Arunabha 173
Garattini, Silvio 197
Garcia Castineiras, S. 1359
Garcia-Peregrin, E. 397
Garcia-Sacristan, Albino 121
Garcia-Salguero, Leticia 1903
Garzon, Javiar 329, 1217
Geer, Pamela G. 139
Gelpi, E. 239
Gepp, R.T. 1189
Gerozissis, Kyriaki 1857
Gessner, C.E. 1189
Ghanmi, Z. 257
Ghosh, D.K. 1155
Ghosh, Debidas 127
Ghosh, Pradip K. 127
Giannaccini, Gino 1833
Gibson, Raymond E. 1103
Giridhar, Jaisri 569
Giuliani, Dennis 1373
Glavin, Gary B. 1075
Goberna, R. 1945
Goetz, Kenneth L. 139
Gohda, Eiichi 1801
Goldman, Phyllis S. 1051
Gomez-Sanchez, Celso E. 881
Gomez-Sanchez, Elise P. 881
Gong, T.W. Linda 1037
Gordon, John C. 1435
Goto, Yoshiaki 1793
Greenbaum, Lowell M. 411
Greenberg, H.S. 507
Grunberg, Neil E. 1523
Grundstrom, N. 1099
Guaza, Carmen 1119
Guerrero, J.M. 1945
Guignard, Jean-Pierre 849
Guisado, S. 1359
Gulya, K. 811
Gupta, P.K. 471, 1155
Gurtu, Sunil 1539
Gusovsky, Fabian 671
Hadfield, M.G. 295
Haisenleder, D.J. 1867
Hale, Calvin C. 1809
Hall, Arleen M. 1075
Hall, Iris H. 1923
Halushka, Perry V. 1765
Han, Song-Ping 767
Hara, Nobuyuki 1793
Hara, Youichi 1793
Harik, Sami I. 379
Harlan, Richard E. 1825
Harris, R. Adron 527
Hauck, R.-S. 513
Hauser, Kurt F. 91
Hawk, Natalyn N. 1007
Hayashi, Yukio 1801
Heijnen, Cobi J. 419, 1233
Hendy, G.N. 1427
Henry, D. 1531
Henschen, Stephan 647
Herman, Barbara H. 147
Herrera, Emilio 223
Hieda, Hiroko S. 881
Higaki, Jitsuo 1985
Higashimoto, Yoshifumi 833
Higuchi, Teruhiko 1587
Hill, Mark E. 1843
Himeno, Seiichi 833
Hiney, Jill K. 165
Hirakawa, M. 819
Hirobe, Masaaki 599
Hjorth, Stephan 955
Ho, Peter P.K. 917
Hofland, Leo J. 1013
Hoh, A. 1271
Hollander, D. 1649
Holmes, Elisabeth 1627
Hong, C.Y. 1929
Horohonich, Stephen 181
Hortelano, Paloma 1903
Horwitz, Barbara A. 1037
Horwitz, Susan Band 489
Hoss, Wayne 1051
Howard, Eugene F. 411
Howell, Ralph E. 563
Hudson-Howard, L. 1131
Hughes, John PL-1
Hughes, Kelvin T. 1443
Hung, C.T. 471
Hunter, G.C. 715
Hunter, John C. PL-1
Ideishi, Munehito 335
Ikeda, Masaharu 335
Imeri, Luca 197
Inagami, Tadashi 945
Inazu, Norihisa 841
Irino, Shozo 435
Irvine, Rodney J. 1067
Ishihara, Noriko 29
Ishihara, Takafumi 373
Ishikawa, Makoto 1045

Isom, Gary E. 569
Israel, Jean-Marc 983
Ito, Yasuhiro 1249
Iwama, Minako 29
Iwao, H. 1657
Iwata, Nobuhisa 841
Jackson, Edwin K. 945
Jackson, K.N. 1223
Jamison, James M. 653
Jansen, Jan B.M.J. 281
Jatlow, Peter 625
Javors, Martin A. 1175
John-Allan, K. ST 1569
Johnson, Frank E. 1279
Johnson, Mark D. 359, 793
Johnston, C. 1131
Jolley, Weldon B. 315
Jones, Leslie F. 723
Junck, L. 507
Kachur, J.F. 1223
Kadar, Tibor 463
Kaever, V. 1465
Kambayashi, Junichi 1059
Kanai, Setsuko 1503
Kanayama, Shuji 833
Kapeghian, John C. 19
Karler, R. 1773
Karlsson, H. 301
Karlsson, J.O.G. 543, 1099
Kasa, P. 811
Kasai, Kikuo 1045
Kato, Johji 405
Kato, Nobumasa 1587
Kato, Yuko 59
Katsuragi, Takeshi 1301
Kavelaars, Annemieke 1233
Kawaida, Akemi 1801
Keen, Carl L. 1597
Kerr, David I.B. 1489
Kewitz, H. 1553
Khan, Naim A. 43
Kim, H.S. 687
Kim, Kong Soo 1977
Kim, Suhn Hee 1977
Kimura, S. 1657
Kinnier, William J. 563
Kisara, Kensuke 1671
Kitamura, Kazuo 405
Kitani, Kenichi 1503
Kitano, Shoichi 1545
Knapp, Richard J. 1457
Kneupfer, Mark M. 767
Kobayashi, Bonro 29
Koh, Eio 1545
Koh, Gou Yong 1977
Kolesari, Gary L. 1181
Kondo, Koichi 1611
Konuma, Seiichi 1045
Koota, David 1937
Kosaka, Hiroaki 1249
Krabill, Keith 653
Kristal, M.B. 693
Kuh, Ja Hong 1977
Kuhar, M.J. 635
Kuhlmann, Randall S. 1181
Kulkarni, Shrinivas K. 481
Kulovana, Martina 1349
Kuo, J.S. 1929
Kusa, Regina 1349
Lackovic, Zdravko 49
Lamberts, Steven W.J. 1013
Lamers, Cornelis B.H.W. 281
Langer, S.Z. 443
Lapp, Carol A. 411
Larrick, James W. 189
Lawson, D.M. 1867
Lay, C.S. 1929
Lazure, C. 1427
LeRoy, M. 1569
Leadley, Robert J. Jr. 139
Lebec, O. 1381
Leckman, James F. 247
Leduc, R. 1427
Lee, D.K.H. 1531
Lee, Denise Y. 1443
Lee, H.J. 1343
Lee, Timothy J. 1597
Lefer, Allan M. 427
Lerida, Mar 329, 1217
Lesch, K.P. 1271
Lever, John R. 1967
Levi, Edi 1471
Levine, Allen S. 147
Levy, Gerhard 737
Li, Edmund T.S. 1643
Li, Ting-Kai 231
Lieske, C.N. 1189
Lin, Wenjuan 1451
Linderoth, B. 301
Lindley, Celeste M. 699
Lippiello, Patrick M. 935
Ljusegren, M. Ekstam 543
Lo, Chu S. 273, 865
Logan, Kelley 729
Lombrozo, Leon 707
Lorenzo, Maria J. 55
Lowe, V.C. 1223
Lowrimore, Patricia A. 1175
Lucacchini, Antonio 1833
Lumeng, Lawrence 231
Luo, Shuqin 1643
Lupianez, Jose A. 1903
Lutfy, Kabir 343
Magnusson, B.R. 543
Mais, Dale E. 1765
Majumdar, A.P.N. 777
Makino, Yukiko 599
Malavolti, Mauro 1727
Malone, M.H. 1569
Mamone, James Y. 1279

Mann, D.R. 1601
Marazziti, Donatella 1833
Mares, Pavel 1349
Markle, Ronald A. 965
Marks, Michael J. 935
Martin, Billy R. 895, 1575, 1781
Martinez, E. 239
Martini, Claudia 1833
Massa, John S. 909
Massotte, L. 1879
Mastrocola, Teresa 1661
Mathe, Aleksander A. 287
Matsumoto, Hirokazu 1611
Matsumoto, Miki 1787
Matsumoto, Steven S. 315
Matthiesen, Theo 1421
Maulik, Dev 553
May, Mary 1627
Mayer, S. 1271
Mazorow, Denise L. 793
McCrindle, Brian W. 1021
McKeever, P.E. 507
McQuilkin, Susan J. 527
Mefford, Ivan N. 247
Mehta, Ashok K. 37, 481
Meigs, Robert A. 321
Meikle, A. Wayne 265
Melis, G.B. 1241
Meloche, S. 927
Messer, William S. Jr. 1051
Meunier, J.-Cl. 663
Meyer, H.G. 1189
Meyerson, B.A. 301
Michalek, H. 1027
Michelini, Stefano 1833
Miguez, Isabel 875
Mikami, Hiroshi 1985
Milio, C. 295
Millar, David B. 793
Millis, Richard M. 1699
Minary, Patrick 1857
Minatogawa, Yukiko 1587
Moisand, Ch. 663
Mong, Seymour 309
Monnens, Leo A.H. 849
Monsarrat, B. 663
Montana, W. 1817
Montero, D. 1619
Mora, O.A. 1359
Morgan, John 189
Mori, Michio 1837
Mori, Takesada 1059
Morimoto, Shigeto 1545
Morinaga, Tomonori 1679
Morinelli, Thomas A. 1765
Morishita, Ryuichi 1985
Morley, John E. 147
Morrison, Paul F. 105
Moshier, J.A. 777
Moulinoux, J.-Ph. 43
Moy, J.A. 1867
Moynihan, Jan 1937
Muck-Seler, Dorotea 1331
Muehsam, William T. 563
Mukhopadhyay, S.K. 507
Muratorio, A. 1241
Murdoch, William J. 1961
Murray, Darrell K. 1843
Musacchio, Jose M. PL-9
Musachio, John L. 1967
Musch, Mark W. 1913
Nabata, Takashi 1545
Nagaki, Shigeru 1587
Nagao, Kazuhiro 833
Naim, Michael 803
Nakamura, A. 1657
Nakamura, Tsutomu 1045
Napolitano, A. 1241
Naruse, Kiyoko 59
Naruse, Mitsuhide 59
Natelson, Benjamin H. 1739
Natsumeda, Yutaka 435
Nau, H. 513
Negro-Villar, Andres 699
Neidle, Amos 1517
Nelson, Don H. 1843
Nichikawa, Kohei 1611
Nijkamp, Frans P. 1255
Nishi, Shinzo 1679
Nitta, Kousaku 59
Nityanand, Soniya 367
Nobiletti, John B. 1367
Noronha-Blob, L. 1223
Nowak, J.Z. 443
Oatis, John E. Jr. 1765
Oberkotter, Linda V. 1
Ocame, Dave M. 247
Ogihara, Toshio 1545, 1985
Ohlstein, Eliot H. 181
Ohta, Minoru 1503
Ohta, Shigeru 599
Olianas, Maria C. 591
Olsson, Ray A. 1293
Onali, Pierluigi 591
Ong, Jennifer 1489
Orensanz, Luis M. 121
Orr, T.E. 1601
Ortega, Arturo 1287
Ortega, E. 391
Ortiz, J. 239
Osorio, C. 391
Oster, Michelle H. 1597
Osuna, C. 1945
Othmane, O. 257
Otterweller, John E. 1739
Oveisi, F. 1649
Ozer, Durisehvar 1471
Pahl, M.V. 1649
Palings, Ilona 189
Pan, Helen S. 73

Pan, Yi 1699
Panetta, Jill Ann 917
Panning, Bernhard 647
Parandoosh, Zahra 315
Patel, N. 1649
Patterson, Temp R. 265
Pereira, H. Anne 189
Pericic, Danka 1331
Petrack, B. 687
Piccini, P. 1241
Pietruk, T. 777
Piletta, Pierre 991
Pinsky, Carl 1075
Pintor, A. 1027
Piotrowski, J.J. 715
Plocinski, Alex F. 19
Pohl, Jan 189
Ponzio, Nicolas M. 1373
Porchet, Herve C. 991
Posner, Martin 729
Poth, Merrily 1627
Powell, Daina 67
Prado-Alcala, Roberto A. 679
Prat, John C. 1367
Preston, Gregory M. 1309
Puget, A. 663
Quemener, V. 43
Racaniello, Lori K. 1
Racusen, Lorraine C. 1021
Radeke, H. 1465
Rakonczay, Z. 811
Randall, Carrie L. 1145
Ransom, Richard W. 1103
Ransom, Thomas 1643
Rao, T.S. 687
Rapoport, Robert M. 1715
Raychaudhury, C. 1155
Reilmann, Lotte 647
Reiter, Russel J. 971 minireview
Resch, K. 1465
Reynolds, David J. 1923
Riachi, Naji J. 379
Riddle, Mark A. 247
Rifkin, Barry R. 351
Rimele, T. 1531
Ritz, M.C. 635
Rivera, Luis 121
Roberfroid, Marcel 207
Robins, Roland K. 315
Robles, Lydia PL-1
Rodriguez, E. 391
Rodriguez-Vico, F. 397
Rogers, William 1627
Romm, Elena 935
Ronen, Tal 803
Rosen, Arthur D. 1509
Rosen, Matthew S. 1509
Rosenberg, Howard C. 519
Ross, Chris R. 1809
Rossi, Noreen F. 1091, 1953
Rothman, Richard B. PL-17
Rouabhia, M. 257
Rougeot, Catherine 1857
Rovati, Lucio C. 281
Rovedatti, M.G. 1893
Rowland, Holly C. 1435
Rowley, Jason T. 217
Rowley, Peter T. 217
Rubalcava, Boanerges 315
Rubio, A. 1945
Rudolph, M. Isolde 99
Rugolo, Michela 1661
Ruiz, E. 391
Rush, Michael D. 1279
Russell, Diane Haddock 1293
Saadi, Mostapha 1857
Sagrada, A. 1207
Sairam, M.R. 927
Saito, Kunihiko 1443
Sakai, Masaharu 1679
Sakamoto, Hikaru 29
Sakamoto, Takashi 1679
Sakon, Masato 1059
Sakurada, Shinobu 1671
Sakurada, Tsukasa 1671
Saldana, Sylvia 67
Salibian, A. 1893
Salkovic, Melita 49
Sanaka, Tsutomu 59
Sanchez, Joaquin 121
Sanchez, M. 1649
Sanchez-Blazquez, Pilar 329, 1217
Sanchez-Franco, Franco 55
Sandi, Carmen 1119
Sandvik, Arne K. 453
Sasaguri, Manabu 335
Satoh, Tetsuo 841
Sauro, Marie Donabella 1293
Savino, W. 1687
Sawada, Norimasa 1837
Sayre, F.W. 1569
Sayre, Lawrence M. 379
Schally, Andrew V. 463, 999
Scheffel, Ursula A. 1967
Schiavone, A. 1207
Schneider, Johannes 1421
Schoellnhammer, G. 1271
Schoemaker, J. 1081
Schulick, Andrew 671
Schulte, H.M. 1271
Scoville, John P. 1923
Sebok, K. 927
Sebrechts, Mark M. 625
Seidah, N.G. 1427
Seleshi, Ermias 1175
Semmekrot, Ben A. 849
Semus, Simon F. 1781
Sepulveda, Waldo H. 99
Seul, Kyung Hwan 1977
Seutin, V. 1879

Shanker, Kirpa 367
Shariff, Khareem 793
Sharp, Trevor 955
Shaywitz, Bennett A. 625
Shaywitz, Sally E. 625
Shehan, Kathleen L. 1727
Sheid, Bertrum 1367
Shibouta, Yumiko 1611
Shields, Heidi E. 1181
Shimizu, Keiko 1837
Shimoda, Shin-Ichi 1045
Shino, Akio 1611
Shinomura, Yasuhisa 833
Shizume, Kazuo 59
Siegfried, Martin R. 427
Sierra, Victor 343
Simlot, Rupendra 1923
Simpkins, Cuthbert O. 793
Singer, George 1451
Singh, B.N. 367
Singh, Malvinder P. 379
Skolnick, M. 1131
Smith, P.R. PL-9
Snawder, John E. 1635
Solana-Figueroa, Rafael 679
Soldani, R. 1241
Solomon, Howard F. 1103
Somogyi, Andrew A. 1067
Spitznagel, John K. 189
Squassoni, Eleonora 1265
Stankov, Bojidar 971 minireview
Stathis, Marigo 1967
Stenfors, Carina 287
Stern, Judith S. 1037
ST John-Allan, K. 1569
Stiene-Martin, Anne 91
Striem, Benjamin J. 803
Stringham, John D. 265
Strobel, Gunther 9
Sturm, B.L. 1223
Sturm, R.J. 1531
Sturman, John 1139
Subramanian, M. 903
Sugatani, Junko 1443
Sugino, Nobuhiro 59
Suh, Harold H. 759
Sung, Cheng-Po 181
Suzuki, Kenji 1671
Suzuki, Nobuhiro 1611
Svensson, S.P. 1099
Sweatt, William 793
Swiergiel, A.H. 1381
Szerdahelyi, P. 811
Szucs, Maria 1279
Tachikawa, Osamu 599
Tackett, Randall L. 723
Taglialatela, Maurizio 885
Takahashi, Hidetoshi 1837
Takamoto, Shoshi 1545
Tallarida, Ronald J. 1559
Tamaoki, Taiki 1657, 1679
Tan, Chay Hoon 1175
Tanaka, Kenjiro 405
Tanaka, Tomoko 405
Tani, Yoshihiro 373
Tapp, Walter N. 1739
Tarui, Seiichiro 833
Tasaki, Yoshikazu 599
Tate, Elin A. 793
Tekulics, P. 811
Tekwani, B.L. 367
Telegdy, Gyula 463
Temizer, Aytekin 1471
Terada, Nobuyuki 1249
Terashita, Zen-Ichi 1611
Theodorsson, Elvar 287
Theoharides, T.C. 607
Thomas, Gail E. 1279
Thompson, A.C. 693
Thompson, Yeini G. 411
Thomsen, T. 1553
Threlkeld, Penny G. 231
Ticku, Maharaj K. 37, 481
Tietz, Elizabeth I. 519
Tiligada, Ekaterini 81
Todd, Sherrill L. 895
Tokunaga, Takeo 1301
Toledo, Leticia M. 19
Tolliver, Teresa J. 247
Tomoda, M. 819
Topley, N. 1465
Toresson, Gudrun 1707
Tortella, Frank C. PL-1
Trachtman, Howard 1139
Trapani, Angelo J. 767
Trouth, C. Ovid 1699
Tsai, Chun-Che 653
Tseng, Leon F. 759
Tsubouchi, Hirohito 1801
Tsuchiya, Ken 59
Tsuchiya, M. 819
Tsujinaka, Toshimasa 1059
Tsukada, Kinji 1837
Tu, M.S. 1929
Tuomela, T. 1197
Turkanis, S.A. 1773
Turner, Barbara B. 1399
Udofia, Uwem P. 1007
Ueda, W. 819
Uemura, Yoshio 1059
Ulibarri, Isabel 1217
Umeki, Shigenobu 1111
Ungerstedt, U. 301
Uozumi, Mitsuro 1249
Usune, Sadaharu 1301
Van Den Dungen, H.M. 1081
Van Der Wal, Wim E. 419
Van Dieten, J.A.M.J. 1081
Van Gorp, Cornelius 1715
Van Koetsveld, Peter M. 1013

Van Oosterhout, Antoon J.M. 1255
Van Rees, G.P. 1081
Vauquelin, G. 497
Vaziri, N.D. 1649
Velisek, Libor 1349
Verlangieri, Anthony J. 619
Vernillo, Anthony T. 351
Verschueren, H. 497
Vincent, Jean-Didier 983
Votta, Bartholomew 309
Wagner, Henry N. Jr. 1967
Walczak, S.M. 777
Waldum, Helge L. 453
Wali, F.A. 1747
Walker, Judith S. 737
Walter, Robert M. Jr. 1597
Walters, Judith R. 73
Wang, Bin C. 139
Warner, R. 1131
Watson, Ronald R. 1319
Watzl, Bernhard 1319
Weber, George 435
Wegner, C. 513
Weicker, Helmut 9
Weiss, George B. 19
Werle, Egon O. 9
Wessel, K. 1465
Westfall, Thomas C. 767
Wetsel, William 699
White, Bruce A. 1309
Whittaker, Joseph A.C. 1699
Wiesel, Paul H. 849
Williams, Evan F. 1007
Wilson, Douglas E. 189
Wilson, John Fawcett 81
Winders, Suzan E. 1523
Wong, David T. 231
Wood, P.L. 687
Woutersen, Ruud A. 281
Wray, Arlene 359
Wroblewski, Jarda T. 155
Wunder, J. 1465
Yamada, Yasukazu 435
Yamaji, Yasufumi 435
Yamamoto, Itaru 1801
Yamamoto, Ritsu 1679
Yamamura, Henry I. 1457
Yang, Chia-Ping Huang 489
Yang, K.H. 1343
Yang, M.C.M. 1929
Yasumoto, Takeshi 671
Yoburn, Byron C. 343
Yokoyama, Sigeaki 1837
Young, J. Gerald 625
Yu, P.C. 1929
Yu, Xu-Bo 729
Zafra, M.F. 397
Zajac, C.S. 903
Zarandi, Marta 999
Zehavi, Uri 803
Zeng, Zheng Pei 59
Zhang, Hong 519
Zhang, Jimin 729
Zhang, Jin 983
Zhou, De-He 553
Zhu, Jia L. 139
Zieleniewski, Wojciech 1851
Zimmer, G. 1465
Zimmerman, Christine 785
Zipkin, Robert E. 427
Zisowsky, Stefan 647
Zorn, Nancy E. 1293
Zorzano, Antonio 223

Life Sciences, Vol. 46, pp. 9-25 Pergamon Press
Printed in the U.S.A.

SUBJECT INDEX

acetylcholine (ACh), and etorphine 1167
acetylcholine, effect on the hypothalamic POMC system 81 minireview
acetylcholinesterase, pH effects in the spontaneous reactivation of 1189
acetylcholinesterase, selective inhibition of 1553
ACh, and ATP 1301
acid secretion, GABA-mimetic 1793
ACTH, concentrations effected by restrain stress 1601
action potentials, involvement of Na^+ and Ca^{2+} currents in somatotrophs 983
acute metabolic acidosis, and renal cortex 1903
acute stress, urine and vaginal exudate on testosterone 1359
acute tolerance, to beta-endorphin, morphine and DPDPE 759
acute workload, effect on rat cardiac beta-adrenoceptor subtypes 9
AD-5, N-paramethoxyphenylacetyldehydroalanine 207
AD-5, effect on superoxide and hydrogen peroxide formation 207
adenosine, activates nPKC in splenocytes 1293
adenosine, and spontaneous transmitter release 1389
adenosine nitrobenzylthioinosine, nucleoside transport and hypertension 1007
adenosine receptor, on motor nerve terminals 1389
adenosine receptors, and xanthine 563
adenyl cyclase, tetrahydrocannabinol 217
adenylate cyclase, and saccharin 803
adenylate cyclase, in human erythrocytes 43
adjuvant arthritis, anti-inflammatory effects of dexamethasone 411
adrenal, potassium and aldosterone secretion 173
adrenal gland, etorphine and catecholamine secretion 1167
adrenal regeneration, verapamil in 1851
adrenalectomy, and angiotensinogen mRNA level 1657
adrenals, corticosterone implantation and SIW 1451
adriamycin, magnetic microspheres in 471
age difference, in respiratory sensitivity 1699
age differences, in renal function 849
aging, ANP in rat kidney 785
aging, adrenergic response in senescent aorta 359
aging, brain monoamines in rats 295
agmatine analogs, of GH-RH in vitro biological activity of 999
alcohol-preferring rats, 5HT-1A receptor in 231
aldosterone, and cylcosporin, nicardipine, and cyclic AMP 1985
aldosterone, and potassium 173
alliesthesia, and cyproheptadine, in sweet tastes 1381
alloxan diabetes, and streptozotocin diabetes 49
alpha 1 adrenergic receptor, in senescent aorta 359
alpha receptors, and cocaine-induced tachycardia 723
alpha^2-adrenoceptors, and dopamine on esophagus 121
alpha^2-adrenoceptors, pertussis toxin resistant 1099
alpha-adrenoceptors, myocardium, function of 743 minireview
alpha-fetoprotein, recombinant, in yeast 1679
Alzheimer's disease, treatment with cholinomimetics 1553
ametantrone, and antiviral activity of poly r(A-U) 653
2-amino-7-phosphonoheptanoate, on pentylenetetrazol-induced seizures 1349
3-amino-alpha-ethyl 2,4,6 triiodobenzenepropanoic acid, in rat pups 1

0024-3205/90 $3.00 + .00
Copyright (c) 1990 Pergamon Press plc

aminoisobutyric acid, and mastoparan 865
aminophyline, effect on anaphylaxis and bronchoconstriction 917
amniotic fluid, placental opioid-enhancing factor in 693
amphetamine, reverse tolerance 1773
amphibian liver arginase activity, effect of different protein intake 1893
analgesia, and POEF in pregnancy 693
analgesia, clonidine, in man 991
analgesia, induced by transcranial electrostimulation 1131
analgesic effect, chronic 737
anaphylaxis, antigen-induced reaction in sensitilized guinea pigs 917
angiotensin, effect on histone H3 phosphorylation 1479
angiotensin II, changes after chemotherapy-induced emesis 699
angiotensin II, non-peptide angiotensin antagonist 945
angiotensin II, on angiotensinogen production 1657
angiotensin II, regional formation 335
angiotensin receptor antagonist, non-peptide 945
angiotensinogen mRNA, effect of angiotensin II on 1657
angiotensinogen, effect of angiotensin II on 1657
ANP, atrial natriuretic peptide 1977
ANP, in pericardial fluid 1977
anti-asthma compound, effect in animal models 917
anticonvulsant, ethanol in seizures 481
anticonvulsants, effect on brain somatostatin and GABA 1587
antidepressants, effects on ^{3}H-imipramine binding 1619
anti-gout, and cyclic imides 1923
antinociception, activity on D-Arg-substituted tetrapeptides 1671
anuran urinary nitrogen end products, and Bufo arenarum liver 1893
anxiety, and BDZ binding inhibitory activity in 1833
aorta, albumin mass transfer rate in rats 965
aorta, inositol uptake in 1715
aorta, senescent, adrenergic response in 359
arachidonic acid, absorption in uremia 1649
arginase activity, in Bufo areranum liver 1893
aromatase, effects of suicide substrates 321
aromatization of androgens, intermediary oxygenation steps 321
arterial blood pressure, and cyclooxygenase inhibitors 585
arterial blood pressure, cardiorenal actions of endothelin 577
artial natriuretic peptide (ANP), effects on renal function 849
artial natriuretic peptide, plasma levels 849
artificial insemination, LHRH-A does not affect sperm quality 1081
ascorbic acid deficiency, in scorbutic rats 1249
asthma, and bronchial hyperresponsiveness 1255 minireview
atherosclerosis, flurometric assay of 715
atherosclerosis, oxygen radicals in 715
ATP, postjunctional release 1301
ATP, release mediated by ACh 1301
ATP, release mediated by norepinephrine receptors 1301
atrial natriuretic factor (ANF), lead acetate interaction with 569
atrial natriuretic factor, and maitotoxin action on cGMP 671
atrial natriuretic peptide (ANP), in aging rat kidney 785
atrial natriuretic peptide, effect on histone H3 phophorylation 1479
atriopeptin, mechanism of release 139
atropine, effects on memory 679
attention deficit disorder (ADD), and GH and prolactin response in 625
autonomic nervous system, and immune response 419
basic fibroblast growth factor, heparin-binding angiogenic polypeptide 1809
behavioral action, and naloxone-antagonism 463
benserazide, blockade of serotonin synthesis 1207
benzodiazepine receptors, in stress 1833
benzodiazepines, and beta-carboline tolerance 519

beta, endorphin, on thymulin production 1687
beta-adrenergic agent, effect of epinephrine on sensitized guinea pigs 917
beta-adrenoceptors, adaptation to training and exercise
beta-carbolines, and benzodiazepine 519
beta-endorphin, acute tolerance 759
beta-endorphin, concentrations effected by restrain stress 1601
beta-endorphin, secretion by lymphocytes 1233
beta-endorphin secretion, glucocorticoid regulation 1233
bile acids, and biliary protein secretion 1727
bile salts, cytotoxicity in vivo and in vitro 1503
biliary excretion of enzymes, and cytotoxicity of bile salts 1503
biliary protein secretion, bile acids in 1727
bipolar disorder, mechanism of lithium action in 1175
birth, placental opioid-enhancing factor in 693
birth weight, prenatal effects of THC 903
blood flow, and portal vein 1929
blood pressure, effects of sarafotoxin and endothelin on 767
blood volume measurement, indocyanine green dye in hemolysate 647
body temperature, GABA-mimetic and gastric acid secretion 1793
bovine mesenteric arteries, pertussis toxin and cGMP 543
brain, aging rat, muscarinic receptor recovery in 1027
brain, mast cells in 607 minireview
brain, rat, morphine from codeine in 1067
brain, rat, muscarinic receptor subtypes in brain 1051
brain neuropeptides, effects of microwave irradiation 287
brain regions, and middle-aged rats 295
brain slices, morphine and catecholaminergic neurons 1879
brain tumors, and opioid receptors 1279
brain tumors, and sigma receptors 1279
brainstem neurons, age differences 1699
brown adipose tissue, denervation, and 2-deoxy-D-glucose 1037
BTM-1086, antimuscarinic effects of 1223
Bufo arenarum, arginase activity in 1893
buspirone, and carbohydrate intake 1643
buspirone, and hippocampal 5HT system 197
butylrylcholinesterase, effect of galanthamine on 1553
cAMP, saccharin induced formation of 803
calcium, analysis by fluorescent probes 1175
calcium, and endogenous dopamine release 885
calcium, potassium and aldosterone secretion 173
calcium channel agonist, effect on vasopressin secretion 1091
calcium channel inhibitors, and vesicular dopamine 857
calcium flux, effect on vasopressin secretion 1091
calcium metabolism, and erythrocyte 1471
calmodulin, and clozapine and prolactin secretion 1013
calmodulin, potassium and aldosterone secretion 173
calmodulin antagonists, effect on vasopressin secretion 1091
calpain, role in platelet activation 1059
camostate, on pancreatic growth 281
cannabinoid, role of the delta9-THC phenolic moiety 1781
cannabinoids, inhibits adenyl cyclase 217
cannabinoids, mouse behavior 1575
CAP 37, cationic antimicrobial protein 189
CAP 37, homologous to inflammatory proteinases 189
captopril, cardiorenal actions of endothelin 577
carbohydate, effect of 8-OH-DPAT and BUSP on 1643
carbonyl reductase, ovarian, effect of glucocorticoid on 841
catecholamine secretion, and etorphine 1167
catecholamines, and GH and prolactin response in ADD 625
C57BL/6J mice, in ethanol teratogenicity 1145

cell proliferation, opioids and astrocyte growth 91
cell volume regulation, and hypertension 1139
cell-free system, and kinetics of PMA-stimulated NADPH oxidase 1111
cerebrospinal fluid (CSF), human, serotonin in 247
cGMP, NDRF increases cGMP levels 1531
cGMP, in differentiating K562 315
chemical communication, urine and vaginal exudate on testosterone 1359
chemotaxis, and CAP 37 189
chick embryo, antiteratogenic effects of metoprolol 1181
chick embryo, teratogenic effects of dopamine 1181
chicken, esophageal contractions, and dopamine 121
chicken embryo, D-aspartic acid in 1517
chimera, human to mouse 1373
chloride flux, and ethanol 527
cholesterogenesis, and clofibrate 397
choline, effects on memory 679
cholinergic system, ischemia in newborn pig spinal cord 811
chromogranin A, parathyroid secretory protein-1 1427
chronic pain, and pertussis toxin 329
chronopharmacology, of furosemide 827
ciliate motility, and magnetic field 1509
cisplatin, chemotherapy-induced emesis 699
clofibrate, and cholesterogenesis 397
clonidine, analgesia, in man 991
clozapine, and prolactin secretion 1013
cocaine, antagonists PL-17 dialogue
cocaine, effect of withdrawal on isolated heart function 1569
cocaine, immunomodulation by 1319 minireview
cocaine, induced tachycardia 723
cocaine, structure-activity relationships 635
cocaine binding protein, human placenta 553
codeine, in rat brain, morphine from 1067
colonic mucosal growth, effect of calcium on proliferation 777
colonic mucosal growth, effect of gastrin on gene expression 777
conformational angle, and role of the delta9-THC phenolic moiety 1781
copper, in plasma of HIV, AIDS patients 1597
corticosterone implantation, and schedule-induced wheelrunning 1451
corticosterone secretion, gamma-aminobutyric acid (GABA) effect on 875
corticotropin, effect on histone H3 phosphorylation 1479
cotinine, inhibits steroidogenesis 265
cross-tolerance, spinal and supraspinal, and morphine 343
cyclazocine, alpha and beta receptor binding 895
cyclic 3',5'-guanosine monophosphate (cGMP), and pertussis toxin 543
cyclic adenosine monophosphate (cAMP), and invasiveness of lymphoma cells 497
cyclic adenosine monophosphate, phenytoin on 351
cyclic adenosine monophosphate, potassium and aldosterone secretion 173
cyclic AMP, and Ca inhibition of enterocyte Na/H exchange 1913
cyclic AMP, and cyclosporin, aldosterone, and nicardipine 1985
cyclic AMP, and tetrahydrocannabinol 217
cyclic imides, anti-gout, and uric acid 1923
cyclosporin, and aldosterone, nicardipine, and cyclic AMP 1985
cyclosporine, effect on seizure threshold 1021
cyproheptadine, effects on alliesthesia 1381
cystic fibrosis, and chloride transport 1265
cystic fibrosis, and cyclic AMP 1661
cystic fibrosis, and hypotonic shock 1661
cystometrogram, and antimuscarinic effects of BTM-1086 1223
cytochalasin B, effects on glucose and ascorbic acid transport 619
DAMGO, opioid binding to intact NG-108-15 cells 1457
DAMGO, spinal and supraspinal, and morphine 343

D-Arg-substituted tetrapeptides, and antinociception activity 1671
D-aspartic acid, developmental changes in chicken embryo 1517
D-aspartic acid, developmental changes in neonatal rat 1517
deethylase activity, of placental aromatase 321
deglycosylation, and FSH disappearance 927
dehydroepiandrosterone (DHEA), anti-glucocoricoid effects on lymphocytes 1627
deiodinase, in rat Harderian gland 1945
delivery, birth, placental opioid-enhancing factor in 693
delta opioid agonist, metkephamid, in the gut 1075
delta ^{9}-THC, cannabininetic activity in mouse and dog 1575
dexamethasone, and glucose uptake 1843
dexamethasone, effects on t-kininogen gene expression 411
dextromethorphan, autoradiography PL-9
dextromethorphan, high affinity binding sites, brain (guinea pig) PL-9
DHP calcium-channel antagonists, modulatory effect on catalepsy 37
diabetes mellitus, experimental, alloxan and streptozotocin 49
diabetic angiopathies, possible pathogenesis 619
diacylglycerol, in differentiating K562 315
diazepam, and benzodiazepam 519
differential metabolism, morphine tolerase in rabbit and pika 663
differentiation, second messengers in 315
diflunisal, analgesic effect, multiple dose 737
1,25-dihydroxyvitamin D_3, on DNA & glycosaminoglycans 1545
dihydroergosine, and 5-HT neurons 1331
dihydroxyphenylacetic acid (DOPAC), transport in brain of 105
diisopropyl fluorophosphate(DFP), muscarinic receptor recovery in aging 1027
2,3-dimercaptopropane-1-sulfonic acid (DMPS), postnatal exposure 1287
2,3-dimercaptopropane-1-sulfonic acid (DMPS), prenatal exposure 1287
2,3-dimercaptopropane-1-sulfonic acid (DMPS), developmental effects 1287
divalent cations, effect on PAF binding 309
DNA, 1,25-dihydroxyvitamin D_3 on 1545
DNA topoisomerase II, effects in transcriptional initiation 1309
dog static-ataxia, and water soluble cannabinoids 1575
dopamine, alloxan and streptozotocin diabetes 49
dopamine, and alpha-2 adrenoceptors on esophagus 121
dopamine, and clozapine and prolactin secretion 1013
dopamine, and middle-aged rats 295
dopamine, effect on the hypothalamic POMC system 81 minireview
dopamine, tissue and plasma levels in chick embryo 1181
dopamine agonist, and striatal lesion on 73
dopamine and serotonin receptors, radioligand binding in vivo 1967
dopamine autoreceptors, and phenothiazine drug metabolites 443
dopamine metabolism, and depot neuroleptic and preproenkephalin 687
dopamine receptors, D1/D2 1817
dopamine reuptake inhibitors, and cocaine antagonists PL-17 dialogue
dopamine transporter, and cocaine inhibition 635
dopamine turnover, pHVA intercorrelation with 707
dopaminergic antagonist, and prolactin release in lactating rats 1867
down-regulation and recovery, muscarinic receptor in aging 1027
DPDPE, and radioligand binding 1457
DPDPE, spinal and supraspinal, and morphine 343
D-Pen^2-D-Pen^5-enkephalin (DPDPE), acute tolerance 759
drug metabolites, phenothiazine 443
drug targeting, magnetic microspheres in 471
electrically evoked dopamine release 443
electrochemical detection, serotonin in human lumbar CSF 247
electrolyte excretion, cardiorenal actions of endothelin 577
electromagnetic stimulation (EMS), at neuromuscular junction 1747
electrostimulation, in cranial region to induce analgesia 1131
embryo, in ethanol teratogenicity 1145

endogenous ligands, in stress 1833
endogenous opiates, and antagonism in D-Trp-6-LH-RH action 463
endogenous opioids, and astrocyte growth 91
endothelin, and acute renal failure in rats 1611
endothelin, biosynthesis of 181
endothelin, cardiac effects of 767
endothelin, effect on plasma renin activity 59
endothelin, effect on renal blood flow 59
endothelin, effect on renal clearances 59
endothelin, effect on vascular resistance 59
endothelin, immunoreactive, in rat lung 405
endothelin, in maternal and fetal blood 1045
endothelin (ET-1), synthesis in rat endothelial cells 881
endothelin monoclonal antibody, and acute renal failure in rats 1611
endothelin-1, aldosterone and renal function 577
endothelin-1, and cyclooxygenase inhibitors 585
endothelium, biosynthesis of endothelin 181
endotoxic shock, PGI_2 and superoxide dismutase 1421
enkephalin mRNA, and depot neuroleptic 687
enkephalinase, degradation of the tetrapeptides 1671
environmental stimuli, sympatho-adrenal system and immune response 419
epidermal growth factor, mouse, after phenylephrine 1197
erythrocyte deformability, and thyroxine 1471
erythrocyte, and thyroxine 1471
erythrocytes, human, adenylate cyclase in 43
essential hypertension, serotonin in platelets in 367
estradiol, reproductive axis in hypothyroid rats 391
estrogen, effect on glucocorticoid receptor 1399
ethanol, and NMDA seizures 481
ethanol, and chloride channels 527
ethanol, and kappa opioid receptors 1119
ethanol, in vivo elimination in different species 223
ethanol (ETOH), effect on ovarian steroid secretion 165
ethanol teratogenicity, prostaglandins and thromboxane in 1145
etorphine, and catecholamine secretion 1167
extraction fraction, microdialysis sampling and infusion 105
fatty acid analogs, vasoconstrictor effects 427
feeding, 5-HT_{1A} agonists and carbohydrates 1643
feeding, opiates in 147
female rats, hypothyroidism-induced in 391
fetal blood, human to mouse xenografts 1373
fibroblasts, and chloride transport 1265
filariasis, immunodiagnosis of 1155
fish melanophores, and pertussis toxin resistant $alpha_2$-adrenoceptors 109
Fischer 344 rat, adrenergic repsonse in senescent aorta 359
flunitrazepam, and chloride channels 527
fluorescein isothiocyanate (FITC), conjugated bovine serum albumin 965
fluorimetric detection, and total MHPG in human plasma 239
fluorometric detection, serotonin in human lumbar CSF 247
food intake, cyproheptadine and alliesthesia for sweet tastes 1381
FOS protein, immunocytochemistry of 1825
furosemide, chronopharmacology of 827
GABA, effect on the hypothalamic POMC system 81 minireview
GABA, gamma-aminobutyric acid 81 minireview
$GABA_A$-and $GABA_B$-receptor antagonists, in peripheral tissues 14
$GABA_A$ and $GABA_B$ receptors, in peripheral tissues 1489 minireview
GABA-neurotransmission, in peripheral tissues 1489 minireview
GABA-mimetic, and gastric acid secretion 1793
galanthamine, effect on human cholinesterase 1553
gamma amino-butyric acid, and chloride channels 527

gamma-aminobutyric acid (GABA), effect of anticonvulsants on brain 1587
gamma-aminobutyric acid (GABA), effect on corticosterone secretion 875
gamma-glutamyl transpeptidase, hydrolysis of gamma-glutaminase 1343
gastric acid secretion, and delta opioid activity in the gut 1075
gastrin, effect on gastric histamine release 453
GBR1209, and cocaine antagonists PL-17 dialogue
GDP binding, IBAT denervation and 2-deoxy-D-glucose 1037
G_i/G_o proteins, and Ir-SP and 5-HT content of CNS 1217
glial fibrillary acidic protein, opioids and astrocyte growth 91
glitter drop method, for random sampling, labeling index, cell counts 507
globus pallidus, and striatal lesion on 73
glomerular filtration rate, and cyclooxygenase inhibitors 585
glomerular filtration rate, cardiorenal actions of endothelin 577
glucocorticoid, effect on ovarian CR 841
glucocorticoid receptor, effect of estrogen on 1399
glucocorticoids, and hypothalamic POMC system gene expression 81 minireview
glucose transport, points of inhibition 1843
glutamic acid, effect on the hypothalamic POMC system 81 minireview
glutamine, substrate of gamma-glutamyl transpeptidase 1343
glycine, recognition sites 155
glycosaminoglycans, 1,25-dihydroxyvitamin D_3 on 1545
gonadal steroids, and hypothalamic POMC system gene expression 81 minireview
gonadontropin, and FSH disappearance 927
G protein, in receptor-mediated signal transduction 209
growth factor beta-1, transforming of 181
growth hormone (GH), and prolactin response to MPH in ADD 625
growth hormone, hormone secretion and membrane currents 983
growth hormone-releasing hormone(GH-RH) , new agmatine analogs of 999
guinea pig peripheral tissues, and antimuscarinic effects of BTM-1086 1223
guinea pigs, opiates and feeding in 147
haloperidol decanoate, and depot neuroleptic and preproenkephalin 687
halothane, effect on protein kinase C 819
hamster, trypsin inhibitions and pancreatic growth 281
hamsters, LD schedules and CHF survival 1739
handling, and immune function 1937
Harderian gland, 5'-deiodinase in 1945
head-twitch behavior, imipramine, dihydroergosine 5-HT neurons 1331
heart, effects of sarafotoxin and endothelin on 767
heart, function of myocardial alpha-adrenoceptors 743 minireview
heart failure, and light-dark schedules 1739
heparin sulfate, storage site for basic fibroblast growth factor 1809
hepatic cytotoxicity, of bile salts 1503
hepatocyte growth factor, in mice with liver injury 1801
hereditary hepatitus, S-adenosylmethionine in 1837
^{3}H-imipramine, binding to rat cortex 1619
hippocampal, buspirone in 197
hippurate, activator of glutaminase 1343
histone H3, phosphorylation by hormones 1479
HL-60 leukemia cells, synergism of tiazofurin and retinoic acid 435
HL60 cells, and tetrahydrocannabinol 217
HMG-CoA reductase, and clofibrate and cholesterogenesis 397
hot-plate response, inhibition of 759
HPLC, and serotonin in human lumbar CSF 247
HPLC, and total MHPG in human plasma 239
HPLC, high performance liquid chromatography
5-HT behavioural syndrome, microdialysis studies 955
5-HT syndrome, and imipramine and dihydrogenase 1331
5-HT, 5-hydroxytryptamine 1207
5-HT_{1A} agonists, and carbohydrate intake 1643
5-HT_{1A} receptor, and depression 1271

5-HT_{1A} receptor, response to ipsapirone 1271
5-HT, serotonin, effect on small intestine interdigestive activity 1207
[3H]-thymidine incorporation, opioids and astrocyte growth 91
5-HTP, 5hydroxytryptamine 1207
5-HTP, effect on small intestine interdigestive activity 1207
5HTP, 5 hydroxytryptophan 1131
5HTP, effect on transcranial electrostimulation-induced analgesia 1131
human fibroblasts, and A23187 1661
human fibroblasts, and cyclic AMP 1661
human fibroblasts, and hypotonic shock 1661
human immunodeficiency virus, and zinc 1597
human immunodeficiency virus, and copper 1597
human lung, [^{3}H]-RP52770 binding to PAF in 309
human neutrophil, kinetics of PMA-stimulated NADPH oxidase 1111
human placenta, cocaine binding protein 553
human plasma, total MHPG in 239
human, clonidine analgesia in 991
hunger, cyproheptadine and alliesthesia for sweet tastes 1381
hydrogen peroxide, post receptor stimulator of gluocose transport 1843
8-hydroxy-2-(di-n-propylamino)-tetraline, and carbohydrate intake 1643
6-hydroxydopamine, and chronopharmacology of furosemide 827
19-hydroxylation of androgens, function of aromatase 321
5-hydroxytryptophan, reverse tolerance 1773
hydroxy-metaboites, and dopamine release 443
hydroxyindole-O-methyltransferase, and rat Harderian gland 1945
hypernatremia, and hypertension 1139
hyperresponsiveness, bronchial, and lymphocytes 1255 minireview
hypertension, cell volume regulation following 1139
hypertension, effects of sarafotoxin and endothelin on 767
hypothermia, and 5-HT_{1A} receptor 1271
ICS 205-930, antagonism of sertonin effect 1207
imipramine, and 5-HT neurons 1331
immune function, stress and handling 1937
immune response, symphato-adrenal system and 419
immunomodulation, by cocaine 1319 minireview
immunoreactivity, urinary and plasma 833
IMP dehydrogenase, and synergism of tiasofurin and retinoic acid 435
in vitro transcription, and VM26 1309
in vivo microdialysis, NAN-190 955
in vivo voltammetry, buspirone and hippocampal 5HT system 197
indocyanine green, in circulating blood volume 647
indomethancin, and cyclooxygenase inhibitors 585
initiation events, RNA polymerase II 729
inositol phosphate, adrenergic response in senescent aorta 359
inositol, uptake in rat aorta 1715
insulin, and endogenous dopamine release 885
intestinal absorption, of arachidonic acid 1649
intracellular calcium, inhibition of enterocyte Na/H exchange 1913
intracellular pH, and Ca inhibition of enterocyte Na/H exchange 1913
(+)-3-[^{123}I]Iodo-MK-801, binding to NMDA 1103
ion channels, and hypothalamic POMC peptide release 81 minireview
ions, involvement in the hypothalamic POMC peptide release 81 minireview
iopanoic acid, in rat pups 1
ischemia, in newborn pig spinal cord 811
isolated hepatocytes, of bile salts 1503
isoproterenol, in pregnant uterus 99
K562 cells, and tetrahydrocannabinol 217
kappa opioid receptor antagonist, and ethanol preference 1119
ketamine anesthesia, urine and vaginal exudate on testosterone 1359
kidney, and FSH disappearance 927

kidney, nucleoside transport and hypertension 1007
kidney mesangial cells, and leukotriene B_4 metabolism 1465
kidney transplant, lipid peroxidation in 67
kinetics of binding, and purification of nicotine 935
lactating rats, prolactin release in 1867
law of mass action, ligand receptor interactions according to 1559
lead, ANF interaction with 569
lectines, LH and TF5 on 257
left atrial pressure, effect on atriopeptin release 139
leu-enkephalin, on thymulin production 1687
leucine-zipper, protein-DNA binding motif 1309
leukemia cells, and tetrahydrocannabinol 217
leukotoxins, potential shock mediators 427
leukotriene B_4 metabolism, and kidney mesangial cells 1465
leukotrienes, and in vivo release of LHRH and LH 1857
Leydig cell, nicotine in 265
LH, plasma concentrations of 1601
LH-RH superagonist, and naloxone 463
LHRH antagonist, does not affect sperm quality 1081
ligand receptor interactions, oscillation and control 1559
light therapy, and heart failure 1739
linoleic acid derivative, cardiodepressant effects 427
lipid peroxidation, in atherosclerosis 715
lipid peroxidation, in kidney transplant 67
lipopolysaccharide, and nitrate biosynthesis in scorbutic rats 1249
liquid chromatography-electrochemical detection, of THBP 373
liquid chromatography-electrochemical detection, of biogenic amines 373
lithium, effect on intracellular calcium 1175
lithium, effects on testicular functions 127
liver, and FSH disappearance 927
liver, and saccharin induced formation of cAMP 803
liver injury, hepatocyte growth factor in mice after 1801
locomotor activity, mu receptor serotonin link 1539
locus coeruleus, morphine and catecholaminergic neurons 1879
Long-Evans rats, S-adenosylmethionine synthetase isozymes 1837
longevity, LD schedules and CHF survival 1739
lorglumide, on pancreatic growth 281
lumbar, human, serotonin in 247
lung, rat, immunoreactive endothelin in 405
luteinizing hormone (LH), and in vivo release of LHRH and LH 1857
luteinizing hormone-releasing hormone (LHRH), in vivo release by LTC_4 185
lymphocytes, and bronchial hyperresponsiveness 1255 minireview
lymphokines, and bronchial hyperresponsiveness 1255 minireview
lymphoma cells, and cAMP 497
lympocytes, LH and TF5 effects on 257
macronutrient specific appetite, 8-OH-DPAT and BUSP in 1643
Madin Darby canine kidney (MDCK) cells, and mastoparan 865
magnesium deficiency, in potassium content of tissues and fluids 19
magnesium effect, on potassium 19
magnesium effect, on tissue K^+ repletion 19
magnetic albumin microspheres, in drug targeting 471
magnetic field, and motility 1509
maitotoxin, action of on cGMP 671
malathion, developmental defects 1635
MAO inhibitors, effect on ^{3}H-imipramine binding 1619
mast cell, in brain 607 minireview
mastoparan, on PI and PIP kinases 273
mastoparan, on amino acid transport 865
maternal age, prenatal effects of THC 903
maternal vein, endothelin in 1045

mazindol, and cocaine antagonists PL-7 dialogue
meclofenamate, and cyclooxygenase inhibitors 585
melatonin receptors, ligands for 971 minireview
melatonin, binding sites for 971 minireview
melatonin, receptors for 971 minireview
melatonin, sites of action of 971 minireview
membranes, saccharin induced formation of cAMP 803
metabolic clearance, and FSH disappearance 927
1-methyl-4-phenylpyridinium (MPP+), neurotoxicity trends of 379
methylphenidate (MPH), and GH and prolactin response in ADD 625
methysergide, antagonism of serotonin effect 1207
metkephamid, effects in the gut 1075
metoprolol, and dopamine's teratogenic effects 1181
metoprolol, effect of pretreatment on dopamine levels 1181
MHPG, 3-methoxy-4-hydroxyphenylethylene glycol 239
microdialysis, differences between in vivo and invitro 105
microdialysis, in human thalamus 301
microdialysis, quantitative theory for 105
middle-aged, brain monoamines in rats 295
mineralocorticoid receptor, and glucocorticoid binding in pituitary 1399
miniature endplate potentials, adenosine receptor on 1389
mitochondria, IBAT denervation and 2-deoxy-D-glucose 1037
mitochondrial respiration, neurotoxicity trends of MPP+ analogues 379
mitoxantrone, and antiviral activity of poly r(A-U) 653
mixed 5-HT_{1A} receptor agonist/antagonist, microdialysis studies 955
MK-801, binding to NMDA 1103
MK-801, effect on catalepsy 37
ML2 cells, and tetrahydrocannabinol 217
MMPP, 1-methyl-4-(1-methylpyrrol-2-yl)-4-piperidinol 1873
MMPP, oxidation by human monoamine oxidases A and B 1873
monoamines, and middle-aged rats 295
morphine, acute tolerance 759
morphine, and FOS protein 1825
morphine, and catecholamine neurons 1879
morphine, and pertussis toxin 329
morphine, from codeine in rat brain 1067
morphine, opioid binding to intact NG-108-15 cells 1457
morphine, spinal and supraspinal tolerance 343
morphine in morphine-tolerant pikas 663
motoneuron, adenosine receptor on 1389
MPTP, neurotoxicity trends of 379
MPTP, 1-methyl-4-phenyl-1,2,3,6-tetrahydropyridine 379
mu receptors, serotonin link 1539
multiple sclerosis, and brain mast cells 607 minireview
muscarinic acetylcholine receptor, recovery in aging 1027
muscarinic receptor subtypes, and BTM-1086 1223
muscarinic receptors, subtypes in brain 1051
muscle, saccharin induced formation of cAMP 803
MVA-activating enzymes, and clofibrate and cholesterogenesis 397
myocardium, alpha-adrenoceptors in 743 minireview
N-acetyltransferase, 5'-deiodinase in rat Harderian gland 1945
NADPH oxidase, kinetics of 1111
naloxone, and antagonism of D-Trp-6-LH-RH action 463
naloxone, and clonidine analgesia in man 991
naloxone, effect on thermoregulation, in Parkinson's disease 1241
naloxone, placental opioid-enhancing factor in 693
NAN-190, 1-(2-methoxyphenyl)-4-[4-(2-phthalimido)butyl]piperazine 955
NAN-190, microdialysis studies 955
natural killer cells, cord blood in human to mouse xenografts 1373
neomycin, on mastoparan 865

neostriatum, involvement in memory 679
nerve growth factor (NGF), induction of 5-HT_3 binding 1435
N-ethylmaleimide, Ir-SP and 5-HT content of CNS 1217
neural development, opioids and astrocyte growth 91
neuroblasts, culture of 55
neuroinflammation, and brain mast cells 607 minireview
neurokinin A, effects of microwave irradiation 287
neuroleptic treatment, pHVA with dopamine turnover 707
neuroleptics, clozapine and prolactin secretion 1013
neuromuscular junction, adenosine receptor on 1389
neurons, and peripheral GABA-receptors 1489 minireview
neuropeptide K, in human cerebrospinal fluid 1707
neuropeptide Y, effects of microwave irradiation 287
neuropeptides, increase of, by amino acids 55
neurotensin, effects of microwave irradiation 287
neurotoxin, trends in MPP+ analogues 379
neutrophil, relaxes vascular smooth muscle 1531
neutrophil-derived relaxing factor, effect on cGMP 1531
NH_2-terminal big gastrin, immunoreactivity 833
nicardipine, and cyclosporin, aldosterone, and cyclic AMP 1985
nicotine, effect on body composition 1523
nicotine, inhibits steroidogenesis 265
nicotine, purification of 935
nicotine receptor, and purification of nicotine 935
N-(iodoally)spiperone, neuroceptor binding 1967
nitrate, biosynthesis in scorbutic rats 1249
nitric oxide, biosynthesis in scorbutic rats 1249
NMDA excitotoxicity, PD117302 protects against PL-1
NMDA receptor, role in catalepsy 37
N-methyl-D-aspartate (NMDA), MK-801 binding to 1103
N-methyl-D-aspartate, and ethanol in seizures 481
noradrenergic neurotransmission, and non-peptide angiotensin antagonist 945
norepinephrine, alloxan and streptozotocin diabetes 49
norepinephrine, and clozapine and prolactin secretion 1013
norepinephrine, and middle-aged rats 295
norepinephrine, effect on atriopeptin release 139
norepinephrine, in pregnant uterus 99
norepinephrine receptors, and ATP 1301
norepinephrine transporter, and cocaine inhibition 635
normorphine, opioid binding to intact NG-108-15 cells 1457
nuclear protein kinase C, adenosine activates, in splenocytes 1293
nucleoside transport, and hypertension 1007
O-demethylation, morphine from codeine in rat brain 1067
ontogenesis, and perinatal hypoxia 1782
ontogenesis, pentetrazol seizures during 1349
ontogenesis, renal effects of ANP 849
opiate receptors, and alpha and beta-cyclazocine receptors binding 895
opiates, and feeding in guinea pigs 147
opiates, in morphine-tolerant pikas 663
opioid, mu receptor serotonin link 1539
opioid receptors, and brain tumors 1279
opioids, in pregnancy-mediated analgesia 693
organophosphorus compounds, developmental defects 1635
oscillation, control and receptor binding 1559
ovarian histamine, alterations during the periovulatory period in sheep 1961
ovaries, reproductive axis in hypothyroid rats 391
ovary, carbonyl reductase, effect of glucocorticoid on 841
oxygen, AD-5 decreases species production of 207
oxygen free radicals, PGI_2 analog and SOD in rat endotoxemia 1421
PAF antagonist, and radiolabeled antagonist 309

PAF-specific antibody, scintillation proximity assay for 1443
pain, placental opioid-enhancing factor in 693
pancreatic growth, lorglumide on 281
Parkinson's disease, neurotoxicity trends of MPP+ analogues 379
Parkinson's disease, regulation of body temperature 1241
parkinsonism, microdialysis in human thalamus 301
pars tuberalis, melatonin receptors in 971 minireview
parturition, placental opioid-enhancing factor in 693
passive avoidance behaviour, and immune response 419
passive avoidance, prenatal effects of THC 903
PC12 cells, and maitotoxin action on cGMP 671
PCPA, effect on transcranial electrostimulation-induced analgesia 1131
PCPA, p-chlorophenylalanine 1131
PCPGABA, and gastric acid secretion 1793
PD117302, protects against NMDA excitotoxicity PL-1
pentobarbital, and chloride channels 527
pentylenetetrazol, and perinatal hypoxia 1782
pentylenetetrazol, seizures during ontogenesis 1349
periactine, cyproheptadine and alliesthesia for sweet tastes 1381
pericardial fluid, ANP in 1977
pericardium, ANP in pericardial fluid 1977
perinatal hypoxia, and seizure susceptibility 1782
peripheral tissues, GABA-receptors in 1489 minireview
pertussis toxin, Ir-SP and 5-HT content of CNS 1217
pertussis toxin, $alpha_2$-adrenoceptors, resistant 1099
pertussis toxin, and withdrawal syndrome 329
pertussis toxin, basodilation and cGMP 543
P-glycoprotein, degradation rate 489
pH sensitivity, respiratory chemosensitivity, age differences 1699
phencyclidine receptors, and alpha and beta-cyclazocine receptor binding 895
phenothiazines, drug metabolites 443
phenylephrine, mouse EGF following 1197
phenytoin, acts on mouse osteoblast cAMP 351
pheochromocytoma cells (PC-12), 5-HT_3 binding 1435
phorbol esters, activator of protein kinase C, in glucose uptake 1843
phorbol myristate acetate, and kinetics of NADPH oxidase 1111
phorbol myristate acetate, tyrosine kinase activity 29
phosphate buffered saline, and dopamine's teratogenic effects 1181
phosphate buffered saline, effect of pretreatment on dopamine levels 1181
phosphate-dependent glutaminase, and renal cortex 1903
phosphatidylinositol 4-monophosphate kinase, mastoparan on 273
phosphatidylinositol kinase, mastoparan on 273
phosphatidylinositol, potassium and aldosterone secretion 173
phosphatidytlinositol turnover, adrenergic response in senescent aorta 359
phosphinate, acetylcholinesterase 1189
phosphodiesterase inhibitors, and xanthine 563
phosphorylation, halothone and protein kinase C 819
picrotoxin, and ethanol in seizures 481
pig (newborn) spinal cord, ischemia in 811
pika, morphine tolerance 663
pirenzepine, and muscarinic receptor subtypes in brain 1051
pituitary hormone, on mice cell cultures 257
pituitary, glucocorticoid binding in 1399
pituitary, rat somatotroph-enriched cultures 983
placenta, human, microsomal oxidase activities of 321
placentophagia, placental opioid-enhancing factor in 693
plasma, concentrations of zinc and copper in HIV patients 1597
plasma aldosterone concentration, cardiorenal actions of endothelin 577
plasma gonadotropin, reproductive axis in hypothyroid rats 391
plasma kallikrein, fragmentation of chromogranin A 1427

plasma volume, in circulating blood volume 647
platelet, as neuronal tissue analog 1175
platelet, phorbol myristate acetate 29
platelet, tyrosine kinase activity 29
platelet (human), dense granules isolation 1755
platelet activating factor (PAF), [^{3}H]-RP52770 binding to 309
platelet activation, calpain in 1059
platelet dense granules, human, isolation of 1755
platelet-activating factor, and scintillation proximity assay 1443
platelets, nucleoside transport and hypertension 1007
platelets, serotonin in, in hypertension 367
PLO-17, opioid binding to intact NG-108-15 cells 1457
polyamines, adenylate cyclase in human erythrocytes 43
polyclonal stimulation, LH and TF5 on 257
portal vein, and blood flow 1929
potassium deficiency, magnesium involvement 19
(+)-3-PPP, (3-(-3-hydroxyphenyl)-N-(1-propyl)piperidine) PL-9
POEF, and analgesia in pregnancy 693
POEF, placental opioid-enhancing factor 693
pregnancy, prenatal effects of THC 903
pregnancy-mediated analgesia, placental opioid-enhancing factor in 693
pregnant mice, and adrenergic drugs 99
preproenkephalin, and depot neuroleptic 687
presynaptic dopamine receptors, and phenothiazine drug metabolites 443
procaine, and cocaine-induced tachycardia 723
prolactin, afternoon surge, and stress 1407 minireview
prolactin, and GH response to MPH in ADD 625
prolactin, and clozapine 1013
prolactin, expression during hamster estrous cycle 909
prolactin, gene regulation 1309
prolactin, in lactatin rats 1867
prolactin, nocturnal surge, and stress 1407 minireview
prolactin decrease, stress-induced 1407 minireview
prolactin increase, stress-induced 1407 minireview
prolactin transformation, in lactating rats 1867
prolactin-releasing factor, stress in 1407
proopiomelanocortin (POMC), hypothalamic regulation 81 minireview
prostacyclin analog, and SOD in rat endotoxemia 1421
prostaglandin D_2, and cytosolic calcium 793
prostaglandin D_2, effect on superoxide release 793
prostaglandin F_2, effect on neutrophils 793
prostaglandin $F_{2\alpha}$, and cytosolic 793
prostaglandin $F_{2\alpha}$, effect on superoxide release 793
prostaglandin $F_{2\alpha}$, effect on neutrophils 793
prostaglandin, and cyclooxygenase inhibitors 585
prostaglandins, LTC_4, and in vivo release of LHRH and LH 1857
prostaglandins, in ethanol teratogenicity 1145
protease inhibitors, and biosynthesis of endothelin 181
protein, effect of 8-OH-DPAT and BUSP on 1643
protein kinase, potassium and aldosterone secretion 173
proteinases, and CAP 37 189
proteolysis, and chromogranin A 1427
pubertal development, LHRH-A does not affect sperm quality 1081
pulmonary function, change in pulmonary resistance & dynamic compliance 917
1-(2-pyrimydinyl)-piperazine, and hippocampal 5HT system 197
rabbit, morphine tolerance 663
radioimmunoassay, endothelin in maternal and fetal blood 1045
radioligand binding, and DPDPE 1457
rat, and cyclooxygenase inhibitors 585
rat, aortic albumin permeability 965

rat, cardiorenal actions of endothelin 577
rat, glucocorticoid binding in pituitary 1399
rat, neonatal, D-aspartic acid in 1517
rat, pentetrazol seizures during ontogenesis 1349
rat, trypsin inhibitions and pancreatic growth 281
rat striatum, and depot neuroleptic 687
receptor, 5HT-1A, in alcohol-preferring rats 231
receptor autoradiography, muscarinic, brain 1051
receptor imaging, and MK-801 1103
receptor subtypes, muscarinic, brain 1051
recombinant protein, alpha-fetoprotein, in yeast 1679
renal cortex, and acute metabolic acidosis 1903
renal electrolyte excretion, and cyclooxygenase inhibitors 585
renal failure, and arachidonic acid absorption 1649
renal failure, and endothelin 1611
renal hemodynamics, in aging rat 785
renal metabolism, urinary and plasma big gastrin fragments 833
renin, and angiotensinogen mRNA level 1657
renin angiotensin system, and non-peptide angiotensin antagonist 945
renin secretion, effect of Na,K-ATPase inhibitors 1953
reproductive axis, activity of in hypothyroid rats 391
reserpine, effects on rotation 1817
resistance vessel, effects of sarafotoxin and endothelin on 767
respiratory chemosensitivity, age differences 1699
retinoic acid, a differentiation inducer, and synergism of tiazofurin 435
rhesus monkey, urine and vaginal exudate on testosterone 1359
RNA polymerase II, initiation events 729
ropizine, allosteric enhancement of dextromethorphan binding PL-9
R-PIA, N^6-(R)-phenylisopropyladenosine 591
R-PIA, inhibition of synaptosomal tyrosine hydroxylase 591
R(sub III) reflex, and clonidine analgesia in man 991
(R) and (S)-2-ethylhexanoic acid, enantioselective synthesis 513
(R) and (S)-2-ethylhexanoic acid, enantioselective teratogenicity 513
S-adenosylmethionine synthetase isozymes, in hereditary hepatitus 1837
saccharin, and cAMP formation 803
sarafotoxin, cardiac effects of 767
sarcolemmal vescile, cardiac plasma membrane 1809
satiation, cyproheptadine and alliesthesia for sweet tastes 1381
schedule-induced wheelrunning, and corticosterone implantation 1451
schizophrenia, pHVA with dopamine turnover 707
sciatic nerve-gastrocnemius muscle preparation, and EMS 1747
scintillation proximity assay, and platelet-activating factor 1443
seizure threshold, cyclosporine on 1021
seizures, and perinatal hypoxia 1782
seizures, by pentetrazol, during ontogenesis 1349
seizures, ethanol and NMDA in 481
selective secretion, and brain mast cells 607 minireview
self-selection, 5-HT_{1A} agonists and carbohydrates 1643
serotonin, ^{3}H-imipramine binding sites on neurons 1619
serotonin, alloxan and streptozotocin diabetes 49
serotonin, and middle-aged rats 295
serotonin, cyproheptadine and alliesthesia for sweet tastes 1381
serotonin, effect on the hypothalamic POMC system 81 minireview
serotonin, in human lumbar CSF 247
serotonin, in platelets in hypertension 367
serotonin, mu receptor 1539
serotonin, pertussis and N-ethylmaleimide on levels of 1217
serotonin, reverse tolerance 1773
serotonin (5-hydroxytryptamine, 5HT)-1A, in alcohol-preferring rats 231
serotonin (5HT), and transcranial electrostimulation-induced analges 1131

serotonin antagonist, effects on hunger and satiation 1381
serotonin transporter, and cocaine inhibition 635
serotonin uptake, and human platelet dense granules 1755
serotonin-3 ($5HT_3$), binding sites in PC-12 cells 1435
sex differences, glucocorticoid binding in pituitary 1399
shad roe derived inhibitor, T lymphocyte blastogenesis 1367
sialoadenectomy, mouse EGF after phenylephrine 1197
sigma receptor, multiple dextromethorphan binding sites PL-9
sigma receptors, and brain tumors 1279
single photon emission computed tomography (SPECT), and MK-801 1103
smooth muscle, inositol uptake in 1715
sodium excretion, in aging rat 785
solubilized enzyme, and renal cortex 1903
somatostatin, effect of anticonvulsants on brain 1587
somatostatin, secretion of, and VIP 55
sphinganine, inhibit glucose uptake 1843
sphingolipids, inhibit glucose uptake 1843
sphingosine, inhibit glucose uptake 1843
spinal opioid receptors, and morphine 343
spontaneous alternation, prenatal effects of THC 903
spontaneous reactivation, phosphinylated acetylcholine 1189
spontaneous transmitter release, adenosine receptor on 1389
spontaneously hypertensive rats, nucleoside transport and hypertension 1007
steroidogenesis, inhibited by nicotine 265
streptozotocin diabetes, and alloxan diabetes 49
stress, and BDZ binding inhibitory activity in 1833
stress, and delta opioid activity in the gut 1075
stress, and immune function 1937
stress, effect on the testes 1601
stress, induces changes in PRL secretion 1407 minireview
striatal lesion, and APO's effect on globus pallides 73
structure-activity relationship, chemical composition of molecule 635
structure-activity relationship, functional consequences 635
strychnine-insensitive glycine in CNR, in rat centrol nervous system 155
substance P, effect on aortic permeability in vivo 965
substance P, effects of microwave irradiation 287
substance P, pertussis and N-ethylmaleimide on levels of 1217
substantia nigra pars reticulata, and benzodiazepine and beta-carboline 519
substantia nigra, involvement in rotation 1817
sucrose, transport in brain of 105
superoxide dismutase, and PGI_2 analog in rat endotoxemia 1421
suprachiasmatic nuclei, melatonin receptors in 971 minireview
supraspinal opioid receptors, and morphine 343
sweet taste, effects on food intake 1381
swimming training, effect on rat cardiac beta-adrenoceptor subtypes 9
sympathetic nervous system, IBAT denervation and 2-deoxy-D-glucose 1037
synergism, effect of epinephrine on anti-asthmatic effect of tibenelast 917
synthesized calpain inhibitor (calpeptin), role in platelet activation 1059
t-kininogen, gene expression 411
tachycardia, cocaine-induced 723
tachykinin, substance P and aortic permeability changes 965
tail flick, as a measure of analgesia 1131
tail-flick response, inhibition of 759
targeted chemotherapy, magnetic microspheres in 471
teratogenicity, organophosphorates 1635
testes histology, LHRH-A does not affect sperm quality 1081
testicular functions, lithium effects on 127
testosterone, nicotine on concentrations of 265
testosterone, plasma concentration of 1601
testosterone, urine and vaginal exudate on 1359

tetrabenazine binding site, and human platelet dense granules 1755
tetrahydrobiopterin, HPLC-ED of 373
tetrahydrocannabinol, inhibits adenyl cyclase 217
tetrahydrocannabinol (THC), prenatal effects of 903
tetrahydroisoquinoline (TIQ), animal model 599
tetrahydroisoquinoline (TIQ), brain accumulation 599
tetrahydroisoquinoline (TIQ), poor debrisoquine metabolizer 599
tetrahydroisoquinoline (TIQ), relationship to Parkinson's disease 599
thalamus, human, microdialysis in 301
thermoregulation, in postmenopausal women, with Parkinson's disease 1241
thloridazine, and vesicular dopamine 857
thromboxane A_2/prostaglandin H_2 receptors, characterization of 1765
thromboxane, in ethanol teratogenicity 1145
thymic epithelial cells, and endogenous opioids on 1687
thymic factor, on mice cell cultures 257
thymulin, and endogenous opioids on 1687
thyrotropin, in rat pups 1
thyroxine, and erythrocyte 1471
thyroxine, thyroid hormones, in rat pups 1
thyroxine 5'-deiosination, in rat Harderian gland 1945
thyroxine-5'-monodeiodinase, development 1
tiazofurin, a differentiation inducer, and retinoic acid 435
tibenelast, effect on anaphylaxis and bronchoconstriction 917
T lymphocyte blastogenesis, inhibition of, from shad 1367
5'-TM-delta^8-THC, cannabininetic activity in mouse & dog 1575
TMMP, 1,2,3,6-tetrahydro-1-methyl-4-(methylpyrrol)pyridine 1873
TMMP, oxidation by human monoamine oxidases A and B 1873
tolerance, benzodiazepine and beta-carboline 519
tolerance, non-narcotic analgesic 737
tolerance-dependence, and pertussis toxin 329
total MHPG, free plus conjugated 239
transcription, RNA polymerase II 729
transferrin, in kidney transplant 67
transport, inositol uptake in rat aorta 1715
tritiated water, transport in rat brain of 105
tuberoinfundibular dopamine neurons, stress and PRL 1407 minireview
turning behavior, and striatal lesion on 73
twitch contraction, frog, EMS on nerve conduction 1747
TXA_2/PGH_2 receptors, characterization using an iodinated TXA_2/PGH_2 1765
ulcer, and delta opioid activity in the gut 1075
umbilical artery, endothelin in 1045
umbilical cord blood, human to mouse xenografts 1373
umbilical vein, endothelin in 1045
uric acid, and anti-gout cyclic imides 1923
urinary bladder, and antimuscarinic effects of BTM-1086 1223
urinary gastrin, immunoreactivity 833
uterine contractile activity, and adrenergic drugs 99
uterus, and adrenergic drugs 99
uterus, in ethanol teratogenicity 1145
vascular smooth muscle cells, 1,25-dihydroxyvitamin d_3 on 1545
vascular smooth muscle, and non-peptide angiotensin antagonist 945
vascular smooth muscle, relaxation caused by NDRF 1531
vasoactive intestinal peptide (VIP), interaction with ethanol 165
vasoactive intestinal peptide, effect on ovarian steroid secretion 165
vasoactive intestinal peptide, effects of microwave irradiation 287
vasodilation, pertussis toxin and cGMP 543
vasopressin, changes after chemotherapy-induced emesis 699
ventral hippocampal 5-HT release, microdialysis studies 955
ventral tegmental area, morphine and catecholaminergic neurons 1879
verapamil, effect on adrenal regeneration 1851

vesicular dopamine, antidopaminergic action of verapamil 857
VM26, inhibitor of DNA topoisomerase II 1309
vomiting, xanthine-induced 563
withdrawal syndrome, and pertussis toxin 329
xanthine dehydrogenase, and uric acid 1923
xanthine oxidase inhibitors, and uric acid 1923
xanthines, emetic side effects 563
Xenopus, teratogenicity 1635
xenograft, human to mouse 1373
yeast, alpha-fetoprotein in 1679
zinc, in plasma of HIV, AIDS patients 1597

Reproduced with the permission of Pergamon Press Inc., by University Microfilms Inc. Duplication or resale without permission is prohibited.